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Marshall A. Martin

Bob F. Jones

J. William Uhrig

Paul R. Robbins

D. H. Doster

Adm-yes

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Purdue University ● Cooperative Extension Service ● West Lafayette, IN 47907

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THE FOOD AND AGRICULTURE ACT OF 1977: POLICY SETTING AND KEY PROVISIONS

By Marshall A. Martin

In September, after months of debate, the Food and Agriculture Act of 1977 was approved by Congress and signed by President Carter. This farm legislation will be in effect for the 1978 through 1981 crop years. It has the potential for much greater government involvement in agriculture than was experienced under the Agriculture and Consumer Protection Act of 1973. The extent to which the government becomes involved in agriculture largely depends upon world market conditions and U.S. production during the next 4 years. Under normal weather conditions, the annual Treasury cost of the bill is estimated to be between $10.5 billion and $11.5 billion with about half for the food stamp program and half for farm commodity programs.

Policy Setting

A brief review of the economic events of the past few years provides some perspective on why certain provisions were included in the 1977 Food and Agriculture Act. The 1977 Act represents the government's response to farmers' concern over the recent decline in farm income and commodity prices. It also attempts to respond to the consumer concerns raised by the price instability that occurred in the early seventies.

Two factors substantially affected our food situation in the early seventies: a) a dramatic increase in our agricultural exports, and b) an equally dramatic decline in our grain reserves.

The total amount of agricultural exports and the proportion of total production which was exported increased markedly in the early seventies. This increase in agricultural exports was largely a result of a devaluation of the dollar and unfavorable weather conditions, especially in the USSR in 1972 and 1975. Wheat exports increased from an annual average of 713 million bushels in the sixties to 1.1 billion bushels in the 1972/75 period. This level of wheat exports represents about two-thirds of our annual wheat production. Corn and soybean exports doubled from the sixties to the early seventies and now represent about one-fourth and one-half, respectively, of our total production.

Associated with this increase in foreign demand was a decline in grain reserves. World wheat and coarse grain stocks in the early sixties were about 26 percent of world consumption. World grain stocks declined steadily throughout the early seventies reaching a low of 113.7 million metric tons in 1975/76, only 11.6 percent of world consumption.

The increase in foreign demand coupled with the rapid depletion of grain reserves led to a sharp increase in commodity prices in the 1972/75 period. This sharp rise in grain prices enhanced the political support for legislation which would moderate the fluctuation in food prices.

The sharp increase in grain prices in the early seventies encouraged increased production around the world which combined with favorable weather led to record world crops in 1976/77 and 1977/78. Consequently, commodity prices, especially wheat, and U.S. farm income have declined substantially in the past year or so. Moreover, world grain stocks have almost returned to those levels observed in the early sixties. This recent decline in grain prices and farm income led to increased political support from various farmer interest groups for higher support prices and a return to government supply management policies.

This series of economic events observed during the early seventies helped shape the major provisions of the 1977 Food and Agriculture Act. In an effort to respond to these economic events and the perceived interests of farmers and consumers, a two-track policy was written which contains a combination of market-oriented and supply-management provisions.

Key Provisions

Although the 1977 farm bill contains relatively few major changes from previous farm legislation, it does introduce some important new policy provisions. Among these are the level of target prices and loan rates, the use of cost of production to escalate target prices, the abolition of historic farm acreage allotments, and the introduction of a farmer-held grain reserve. The bill also gives the Secretary of Agriculture considerable administrative flexibility within the provisions of the bill. Several of the recent, more important administrative decisions are also discussed.

Target Prices and Loan Rates

Target prices, a concept first introduced in the Agriculture and Consumer Protection Act of 1973, are the basis for calculating deficiency and disaster payments. Deficiency payments are paid to farmers when the market price falls below a legislated target price. Payments to farmers are equal to the eligible production times the difference between the target price and market price during the first 5 months of the marketing year, or the difference between the target price and loan rate, whichever is lower. Annual deficiency payment limitations per producer for wheat, feed grains, and upland cotton are $40,000 for 1978, $45,000 for 1979, and $50,000 for 1980 and 1981. This is an increase from the $20,000 limit contained in the 1973 Act. The payment limits in the law refer to deficiency payments (and land diversion payments) and not to loans, purchases, or disaster payments.

The target price for wheat is $2.90 for 1977 and $3.00 per bushel for 1978 if the 1978 crop exceeds 1.8 billion bushels, or $3.05 if the crop is equal to or less than that amount. The target prices for corn for 1977 and 1978 are $2.00 and $2.10, respectively.

Minimum loan rates for wheat and corn are $2.35 and $2.00, respectively, for the 4-year period unless the national seasonal average does not exceed 105 percent of the loan rate in the preceding year. In that event, the Secretary of Agriculture could lower the loan rate as much as 10 percent per year but no lower than $2.00 for wheat and $1.75 for corn. However, the Secretary would have to increase deficiency payments to compensate farmers for any resulting loss of income. This increase in deficiency payments would not be subject to payment limitations. This provision was included in the bill in an effort to facilitate agricultural exports and avoid excessive accumulation of stocks if market prices remain near the loan rate. At this time, it appears that for the 1977 crop year the national seasonal average price for wheat will be less than 105 percent of the loan rate. Consequently, the 1978 loan rate for wheat is likely to remain at $2.25 per bushel.

Since the target price and the loan rate for corn for the 1977 crop are the same, there will be no deficiency payment for the 1977 corn crop. The maximum deficiency payment for the 1977 wheat crop is $0.65 per bushel for those who planted their full acreage allotment in 1977. Payments of $0.22 per bushel are being made to those who planted no wheat or less than their allotted acres. These payments are being made on the basis of the substitution rules contained in previous farm legislation. Total deficiency payments for the wheat program for the 1977 crop are expected to be $1.2 billion.

If you wish to place your 1977 crop under loan, apply at the local ASCS office. Your storage facilities are subject to inspection. You are responsible for maintaining the quality of the grain stored in your own facilities. If you hold the grain 9 months from the date of the loan, you may turn the grain over to the government and need not pay any interest on the loan. The government has a 2-month grace period in which to accept delivery of the grain. In addition to placing the grain under a nonrecourse loan, you have the option of delivering your grain to the government under a purchase agreement. Currently, you have until March 31, 1978 for wheat and May 31, 1978 for corn to decide whether to sign a purchase agreement or place the 1977 crop under a nonrecourse loan.

The legislation does not contain a target price for soybeans and the determination of a loan rate is left to the discretion of the Secretary. Dairy support prices will be continued through March 1979 at not less than 80 percent of parity. The support price for sugar must not be less than 13.5 cents per pound.

Disaster payment provisions are made only for the 1978 and 1979 crop years. By 1979 the Administration plans to have a revised program of national crop insurance to replace the disaster program.

Cost of Production

Prior to the 1977 Act, adjustments in commodity price support levels had been based upon changes in the parity ratio or an index of prices paid by farmers for production items and changes in yields. The 1977 Act provides for an annual adjustment of target prices based upon USDA estimates of changes in production costs. The target price escalator will be a 2-year moving average based upon variable costs, machinery ownership costs, and an

allocation of general farm overhead costs. No changes in land charge or returns to management will be included in the annual adjustment of target prices.

Set-Aside

The 1977 Act replaces the historical farm acreage allotment with a new set-aside procedure for the 1978-1981 crop years. The Secretary must announce each year (before August 15 for wheat and November 15 for feed grains) the national program acreage. The national program acreage is the estimated number of harvested acres required to meet domestic, export, and inventory adjustment needs.

For purposes of calculating the deficiency payment a national allocation factor must be determined. The national allocation factor equals the national program acreage divided by an estimate of the number of acres actually harvested. The allocation factor for each crop may not be less than 80 nor more than 100 percent of the harvested acreage of that same crop in the current year. The preliminary estimate of the national program average for wheat is 58.7 million acres compared with 66.6 million acres which are expected to be harvested in 1978 giving a preliminary national allocation factor for wheat of 88 percent. The preliminary estimate of the national program acreage for corn is 67.6 million acres.

On August 29, 1977 the USDA announced wheat set-aside intentions of 20 percent. Under the provisions of the 1977 Act producers have three alternatives. If you do not set aside any wheat acreage, you will not be eligible for target price payments, nonrecourse loans, or disaster payments. If you wish to participate in the program, you must set aside 2 acres for each 10 acres planted in wheat for harvest as grain. If you plant no more than 80 percent of the wheat acreage planted for harvest the previous year and set aside 20 percent, you are guaranteed 100 percent target price protection on the normal production from the acreage planted for harvest. However, if you set aside 20 percent but the acreage planted for harvest in the current year is more than 80 percent of that planted for harvest the preceding year, you will receive a deficiency payment equal to your normal production times the national allocation factor (not less than 80 percent nor more than 100 percent) times the difference between the target price and market price, or the difference between the target price and loan rate, whichever is lower.

On November 15, 1977 a conditional 10 percent set-aside for the 1978 feed grain crop was announced. USDA officials plan to continue to monitor the world and domestic coarse grain situation and make a final determination on the feed grain set aside in late January or early February.

If a 10 percent feed grain set-aside is in effect and given current market conditions, participation in the feed grain program is expected to be light. It is expected that a 10 percent feed grain set-aside would reduce U.S. coarse grain production by 3 percent or about 275 million bushels of corn-equivalent.

A 10 percent set-aside would require you to set aside 1 acre for every 10 acres planted for harvest. Feed grain producers who choose not to participate will not be eligible for

deficiency payments, nonrecourse loans, or disaster payments.

If you meet the 10 percent set-aside requirement and also voluntarily reduce your 1978 corn acreage by 5 percent below your 1977 acreage, you will be guaranteed 100 percent target price protection on the normal production from the acreage planted for harvest. However, if you set aside 10 percent but the acreage planted for harvest is more than 95 percent of that planted for harvest in 1977, you will receive a deficiency payment equal to your normal production times the national allocation factor (not less than 80 percent nor more than 100 percent) times the difference between the target price and market price, or the difference between the target price and loan rate, whichever is lower.

If there is a set-aside for both wheat and feed grains, cross-compliance will be required. Under cross-compliance rules a farmer who plants any crops with set-aside provisions must participate in all programs, i.e., if you grow both wheat and corn, you must set aside land from both wheat and corn production. A soybean farmer who also plants corn or wheat must comply with the set-aside requirements on those crops to be eligible for the soybean loan program.

Off-setting compliance rules which apply to tenants operating farms owned by different landlords have recently been released. An owner and/or operator of two or more farms will be eligible for program benefits on participating farms if the normal crop acreage is not exceeded on the nonparticipating farm(s) when a crop subject to set-aside is planted on the nonparticipating farm(s). Furthermore, farmers who do not plant a crop subject to set-aside will not be required to plant within their normal crop acreage and will be eligible for the program benefits applicable to the crops they do plant. If the off-setting compliance rules among farms are not met, you will not be eligible for deficiency payments, nonrecourse loans, or disaster payments.

The set-aside acreage must come out of each farm's normal crop acreage base. Each farm will be assigned a normal crop acreage base equal to the designated acreage planted in 1977. If you participate in the program, your planted acreage plus set-aside acres must not exceed your normal crop acreage base.

In Indiana the major crops included in normal acreage are: corn, wheat, soybeans, barley, oats, rye, sorghum, popcorn, sweet corn and other crops which may be designated by the state ASCS. Set-aside acreage must be cropland that was tilled in at least 1 of the last 3 years.

The sign-up dates for those farmers who wish to participate in the program and set-aside acres are March 1, 1978 through May 1, 1978.

Grazing will be permitted on set-aside acreage during 6 months of the year. The state ASCS committees will establish a continuous, 6-month nongrazing period between February 28 and November 1.

Table 1. Target prices and minimum loan rates.

		1977	1978
Target Prices			
Wheat	($/bu.)	2.90 1/	3.00 4/
Corn	($/bu.)	2.00 2/	2.10
Loan rates			
Wheat	($/bu.)	2.25	2.25 5/
Corn	($/bu.)	2.00 3/	2.00
Soybeans	($/bu.)	3.50	6/

1/ Increased from $2.47.
2/ Increased from $1.70.
3/ Increased from $1.75.
4/ $3.05 if 1978 crop is equal to or less than 1.8 billion bushels.
5/ The legislation provides for a 1978 loan rate for wheat of $2.35 per bushel if the season average price for wheat during the 1977 marketing year exceeds 105 percent of the loan rate. However, the 1978 loan rate will likely remain at $2.25 per bushel since the average market price thus far into the marketing year is less than 105 percent of the 1977 loan rate.
6/ At the Secretary of Agriculture's discretion.

Set-aside acres must be in an approved vegetative cover crop such as annual or perennial grasses and legumes or small grain which is not allowed to mature. Summer fallow is not included.

Grain Reserves

The 1977 Act authorizes the President to enter into negotiations to establish an international food reserve for humanitarian food relief needs. The 1977 Act also authorizes a farmer-held grain reserve. This is to be accomplished through an extended price support loan program of 3 years duration. The legislation provides for a farmer-held wheat reserve of 300 to 700 million bushels. The Secretary has announced a goal of 17 to 19 million tons (670 to 748 million bushels corn-equivalent) in a farmer- held grain reserve.

As an incentive to encourage participation in the farmer-held grain reserve program, the Secretary can pay storage costs and waive or adjust any interest charges. A 3-year grain reserve program for 1976 wheat has been initiated. Payments of 20 cents per bushel have been made as a prepayment of the storage cost for the first year of the expected 3-year period. A farmer-held grain reserve program for 1977 wheat and 1976 and 1977 feed grains has been announced.

Loans under the farmer-held grain reserve program which are redeemed before the market price for wheat reaches 140 percent of the loan rate ($3.15 per bushel) would be subject to a penalty. When the average market price for wheat reaches 140 percent of the loan rate ($3.15 per bushel), the Secretary could stop storage payments in the second month the market price reaches 140 percent of the loan rate in order to encourage farmers to release the grain and repay their loan. The Secretary could call the loan when the market price for wheat reaches 175 percent of the loan rate ($3.94 per bushel). The minimum release price for feed grains is expected to be 125 percent of the loan ($2.50 for corn). The feed grain loans are expected to be called when the market price reaches 140 percent of the loan ($2.80 for corn).

To further encourage farm storage, construction loans of up to $50,000 with a current 8-year repayment period have been authorized for the construction of storage for dry or high moisture grain, soybeans, rice, and silage. Interest rates are the same as those charged the Commodity Credit Corporation by the U.S. Treasury. The state or county ASCS committee which approves the loan can extend the loan for an additional one year twice for a maximum loan extension of 2 years.

Other Provisions

The 1977 Act contains numerous other policy provisions including an elimination of the cash purchase requirement to receive food stamps, increased funding for agricultural research and extension, and an extension of Public Law 480. This year $1.2 billion are to be spent on P. L. 480. About 60 percent of this is for grain shipments.

No major changes are made in the soil and water conservation programs. Special programs for "small farmers" are proposed for farmers with gross annual income of less than $20,000.

Conclusions

Although the 1977 Food and Agriculture Act is a very comprehensive piece of farm legislation, it is also somewhat complex. Also, as in previous farm legislation, various administrative details are left to the discretion of the Secretary of Agriculture. Additional farm program announcements and clarifications are expected in the coming months. Consequently, as each farmer formulates his 1978 crop planting intentions, his decision to participate in the farm program or not will require a very careful analysis of the set-aside, deficiency payment, nonrecourse loan, and grain reserve provisions of the Food and Agriculture Act of 1977.

IMPLICATIONS OF THE 1977 FARM BILL

By Bob F. Jones

The 1977 Farm Bill has the potential for much greater government involvement in agriculture than was experienced from 1973 through 1976. Whether the new price support and supply management provisions result in heavy government involvement depends upon the world demand situation and U.S. supply conditions over the next 4 years. Neither of these can be predicted with a high degree of certainty.

World production of wheat and coarse grains for 1977-78 is estimated to be 1066 million metric tons (MMT).[1/] Although the crop is about 3.4 percent small than last year it is the second year of large world grain crops. U.S. production is 2 percent above last year. West European production has recovered 11.4 percent from a relatively poor harvest last year. USSR production has been revised down from earlier estimates and is now expected to be about 15 percent below the record set last year. World rice production is estimated at 350.5 MMT, 3 percent above last year but slightly below the record harvest of 1975-76. Overall, 1977-78 produced a large crop following a large crop the previous year.

By mid 1978 world grain stocks of wheat and coarse grain are expected to be down about 3 percent from the previous year. Carryover stock levels have been revised downward since the November 11 revision in Russian grain production. U.S. stocks are expected to be up 26 percent (15.6 MMT), while stocks in the USSR are expected to decrease by 8 MMT. Even India now has a record large amount of wheat in storage. Current stocks of wheat in India are about 18 to 20 MMT. This is about two-thirds the annual wheat crop and has been accumulated over about 3 years. The current stock is equal to all Indian wheat imports over the past 3 years. In 1975 and 1976 India purchased a total of more than 280 million bushels of U.S. wheat, making her the largest cash buyer of U.S. wheat in each of those years. India is expected to import only about 18 million bushels of U.S. wheat this year.

Although the Indian grain import situation has changed dramatically in a short period of time, India may again be back in the import market on a larger scale in the next 3 to 5 years. Grain yields there depend upon timely arrival of the monsoons. Since they sometimes arrive late, Indian grain yields are among the most variable for major grain producing areas of the world.

The current world grain situation is dominated by the effects of two large crops in

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1/ U.S. Department of Agriculture, Foreign Agricultural Service, Grains, Foreign Agricultural Circular, F6-23-77, November 11, 1977.

succession and domestic increases in world grain stocks. By mid 1978, world grain stocks are expected to be equal to about 15 percent of projected consumption, about 3 percentage points below the stocks-to-consumption level of 1971-72.

Given this background on the current grain situation, the implications of the Act can perhaps be best understood using a weather probability approach. The probability of world grain production dropping about 2 percent below trend in any 1 year is about 1 chance in 4, or is expected to occur about 25 percent of the time. Although there is some evidence that weather for a particular area of the world follows a cyclical pattern, here it is assumed that each year's weather worldwide is an independent event, i.e., drought does not occur in cycles. Assuming each year is an independent event, probabilities for zero, one, two, three, four or five droughts in 5 years can be calculated. These probabilities are shown in Table 1.

The probability of no major drought in the 5-year period is only 24 percent. If good weather does prevail grain production will likely increase 2 to 3 percent per year. Consumption will likely grow at about the same rate or slightly slower. Given the current large grain stocks and expectations of normal weather for 1978, world stocks will likely continue to accumulate. This means prices for wheat and feed grains will likely remain near loan levels and set-aside will likely be used to keep U.S. supplies from becoming excessive. With large supplies and prices near loan levels, the administration has the authority to lower the loan levels. However, corn cannot be reduced below $1.75 and wheat $2.00 per bushel. Lowering of loan rates would make U.S. grain somewhat more competitive in world markets. Target prices would continue to be adjusted upward by changes in the costs of production. As these two are adjusted, deficiency payments would rise. Some trade-off would be required between government expenditures for storage costs and target price payments. Probably the government will opt for larger set-aside once stocks are around "desired" levels.

Exports will likely continue to grow but will follow an irregular upward path. Even with "normal" weather, growth will be irregular as pockets of poor weather are likely to develop in some parts of the world. The chances are about 3 out of 4 (.76 in Table 1) that some area of the world will experience major weather problems and that at least one drought will occur in the 5-year period. If the poor crop does occur, U.S. exports would rise significantly and grain would come out of storage. However, there would likely be sufficient grain in storage to keep prices from rising much above release prices for the grain in the reserve program. For corn this would be $2.50 and for wheat it is $3.15. Over the 5-year period season average prices for corn would likely be in the $2.15 to $2.35 range.

If at least two poor crops occur in the 5-year period, consumption would likely drop below trend and grain would come out of storage. A part of this would come out of stocks in the USSR and India as well as other places outside the U.S. since they now have larger stocks compared to historic levels. Prices would rise from loan levels but would not likely equal the spectacular run-ups in prices of the 1973-75 period. Several factors suggest a more moderate increase. Stocks are now somewhat more widely held. The export sales reporting system and the grain agreement between the US-USSR may reduce the element of "surprise" in the markets to some extent. Also it is now becoming clearer that a part of the grain buying of 1973-76 was speculative and/or "fear" buying. Various countries are now somewhat better able to evaluate new situations and may have learned from their recent experiences.

Table 1. Estimated impact of world weather on Indiana agriculture

Number of droughts in 5-year period	Probability of at least X droughts	Season average corn price	Set aside	Government grain reserve
	Percent			
0	24	$2.00-2.20	Most years	Considerable build up
1	76	$2.15-2.35	Part of time	Some release
2	37	$2.40-2.65	Little or none	Mostly or all released
3	10	----	None	None
4	1.5	----	None	None
5	0.1	----	None	None

If two or more poor crops occur worldwide, set-aside would likely be eliminated in order to rebuild stock levels to meet future needs. However, even under the poorest weather prospects for 1978-79, stock levels are not expected to decline to 1974-75 levels but would remain about midway between the high of 1971-72 and the low of 1974-75.

Let us turn now to the shorter run or more immediate concerns and try to answer three questions: (1) What is the likely participation in the 1978 set-aside program? (2) What is the likely participation in the loan program for 1977 crops of wheat and feed grains, and (3) What is the likely participation in the extended reseal program for 1977 grain?

Target prices for 1978 wheat are significantly above market prices for wheat. This makes participation in the set-aside program attractive to wheat growers who specialize in wheat. Therefore, a high rate of participation is expected for specialized wheat producers. Probably a 20 percent set-aside will reduce wheat production by about 10 to 12 percent since not all producers will participate; and set-aside acres will likely be from the less productive land. Participation rates in the wheat program will almost surely be lower in the Corn Belt than in the Great Plains because of cross-compliance provisions of the bill. This, however, will likely mean less wheat planted in the Corn Belt as wheat not in the program will not compete favorably with either corn or soybeans.

If the conditional 10 percent set aside for corn becomes reality, participation in the feed grain program in the Corn Belt is likely to be light. Probably fewer than one-half the producers would participate; therefore, production would likely not be reduced by more than 3 to 4 percent as a result of the program. Futures prices for December 1978 corn at above the $2 level will likely not encourage participation in the program. Individual farmers may correctly reason that if enough of their neighbors go into the program, production will be

reduced and prices will remain near loan levels. If market prices are above $2 the deficiency payment would be reduced and many farmers will look upon this as a payment for set aside acres. An anticipated low rate of "set-aside" payments will discourage participation.

It should be noted that failure to participate in the 1978 programs will make a producer ineligible for loans, deficiency payments or disaster payments. This was not the case in 1977 since all production was eligible.

How much grain is likely to go under loan from the 1977 crops? As of December 1, 311 million bushels of 1976 wheat were under loan; 36 million bushels had been delivered to the Commodity Credit Corporation (CCC). As of the same date, 429 million bushels of 1977 wheat were under loan.[2/] Producers have until March 31, 1978 to decide whether they wish to place 1977 wheat under the loan program. With current wheat prices above the loan level, movement of wheat into the loan program may slow and the peak level under loan may be close to the present level.

Substantial amounts of 1977 corn may go under loan. Market prices at early harvest were below $2 per bushel, and all production is eligible for a loan. If a producer has storage he can place his corn under loan and later redeem it when the price rises to $2 plus accrued interest. The 6-percent interest rate will make the loan attractive to farmers who are short of funds for cash flow needs. As of December 1, 1977, 696 million bushels of 1977 corn had been placed under loan; 67 million bushels of the 1976 crop was still under loan.

Recent history gives no guide to how much corn might be placed under loan, but the period from 1960 to 1973 during which loan activity was much more common gives some insight. The largest net amount added to stock in one year was 459 million bushels in 1972. This suggests the total amount going under loan and remaining there at the end of the initial period might be significantly below 500 million bushels.

Now, how much grain is likely to go into the reseal program? The reseal program is already in existence for wheat and some of the 1976 crop has moved into storage under that program. The relatively modest storage payment for reseal (20 cents per bushel) and problems of keeping grain in condition on farms may discourage widespread participation in both the wheat and feed grain storage programs, at least for another year.

It might not be necessary to have a good estimate of the amount of grain under reseal to be able to determine the effects of loan activity and prices. If any grain is under loan in the reseal program, grain not under that program but which is turned over to CCC at the end of the first year cannot be put back into the market at less than 150 percent of the loan rate. The fact that the grain is in CCC hands rather than in the "farmer held reserve" does not make it any more accessible to the market under present release rules. In either case the amount of free corn would be reduced.

A key question is how much of the 1977 crop will go under loan and not be redeemed by

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2/ U.S. Department of Agriculture, Grain Market News, Vol. 25, No. 3, No. 4, January 1978.

farmers. If this quantity is relatively large, say 360 to 400 million bushels, and participation in the 1978 feed grain program is relatively light, a situation could develop in which the market price for 1978 corn could drop significantly below the loan rate. This implies that corn prices through 1978 could be near or slightly above loan levels until harvest and then decline sharply as harvest approaches because of a large proportion of corn being ineligible for loans.

This prospect is evidently a factor in the decision to make the feed grain set-aside for 1978 conditional with a final decision to be announced in February of 1978. If corn prices are relatively strong through the early part of 1978 and participation in the 1978 program appears to be light, a preferred administrative alternative might be to opt for zero set-aside so that all corn could be eligible for loan except in cases where cross-compliance provisions would need to be considered.

In summary, two successive large grain crops have led to rebuilding of grain inventories. Prices prior to harvest were down significantly and would be lower today if loan levels had not been raised for the 1977 crops. Wheat exports are running slightly above last years' level. Feed grain exports will probably be at about the same level as last year, which is significantly above the level prior to 1972. Although the quantity of agricultural exports in fiscal 1978 will be above last year, the total value will be down because of lower export prices. The amount of grain going under storage will be determined largely by the strength of demand and the competitiveness of our grain in export markets relative to that of other major suppliers. Large changes in U.S. exports will depend upon development of major weather problems in countries like India, the USSR and perhaps the People's Republic of China.

1978 AGRICULTURAL OUTLOOK

By J. William Uhrig

Introduction and Assumptions

Making predictions about crop production a year in advance and demand estimates and resultant prices nearly 2 years in advance is more of an art than a science. Many events can occur in the interim which will cause substantial changes in crop production and disappearance which in turn have an impact upon prices. The planted acreage is determined by the summation of all individual farmer decisions, based upon his outlook of how to best use his land resources in view of prospective profit opportunities. Factors such as individual preferences, cash flow requirements, past yield experiences with certain crops, weed problems in certain fields, government programs (and his reaction to them), labor and machinery available, livestock feed needs, and the weather during planting time can alter farmers' plans. The moisture situation can alter plans for certain double crop operations. Adequate subsoil moisture, timely rainfall, and the amount of total rainfall and the temperatures during the growing season has a big influence upon the yields. And variation in national average yields is a large factor in the final crop output.

On the demand side, the amount and kind of livestock produced, and the availability and price of competing grains determine the amount of feed grains needed. Feeding to heavier or lighter average marketing weights, and substitution of grain for protein (or vice versa) also influence the demand for feedgrains.

In the export markets, the U.S. is a residual supplier in many cases. The export demand for grain is influenced by crop production around the world. U.S. governmental policies such as granting of favorable terms of trade, such as "Most Favored Nation," credit terms, and trade agreements are major factors. Promotion by trade organizations have a positive influence upon exports. Governmental policies and economic conditions of importing nations, such as internal tariffs, balance of trade, available cash or items that can generate foreign exchange (currency), and decisions of whether to liquidate or maintain livestock herds are major factors in the amounts imported.

In times of surpluses, the loan rate and availability of "free supplies" are major factors in influencing the resultant prices. The price at which grain can be obtained (through release from loan) influences the high price for the year. However, the loan rate does not provide a "floor" on how low prices may fall at harvest time. The adequacy of transportation, conditioning and storage capacity and the cost of each of these items influences the low price. Farmers' "target" prices at which they will sell are also a factor. The exporters need to obtain grain year around to meet their forward sales. If grain is not moving at the country level, they may offer "higher bids" to get the needed supplies. Conversely, if large supplies

are being sold, they do not have to bid up to get all the grain they can handle.

If the grain trade is to store grain, they want to do it at a profit. They earn their profit through hedging, with the change in basis providing the gross return to storage. Thus, a harvest low bid for corn may be 50 cents under the December or 65 to 70 cents under the July futures. Later in the year, cash grain prices may be only 15 to 20 cents under the July futures. The December corn futures may also be depressed by "hedging pressure" of elevator hedging at harvest time.

In the following analysis, I have assumed:

1. There will be a feed grain set-aside of 10 percent;

2. Loan and target prices as announced plus a $4.50 loan on 1978 soybeans;

3. Wheat set aside of 20 percent;

4. Major crop acreage shifts, not entirely because of government programs;

5. Establishment of "food reserves" for corn and wheat, with a large portion of target levels achieved by 1979.

Wheat

Wheat stocks have been increasing for 4 years. Thus, wheat producers were the first group to experience the recent decline in agricultural prices. In the major wheat-producing states, many farmers depend upon wheat and cattle as their major source of income. The cattle enterprise has been only marginally profitable during the past 3 to 4 years, and large losses have been experienced by some producers. In the wheat states, I expect a high rate of participation in the wheat set-aside program. In minor wheat states in the Corn Belt, wheat acreage may be curtailed or practically eliminated on some farms.

With these assumptions, harvested acreage of wheat would decline 13 percent, production would decline 11 percent in 1978 from 1977 levels. With usage at essentially the same level as projected for 1977, stocks by June 1979 would be reduced to 1 billion bushels, down 20 percent from levels projected for June 1978.

Prices are projected from $1.80 harvest low to $2.25 high with an average of $2.00 per bushel. Wheat producers who participate in the wheat set-aside program are likely to receive large deficiency payments on eligible production in 1978.

Chances of increasing utilization are poor--unless crop failures develop in other importing countries. With large stocks, a sharp decline in U.S. production would result in modest increases in price. Wheat could be released from the world food reserve at prices in a range of $3.15-$3.95.

Wheat Balance Sheet

	1976-77	1977-78	1978-79
Planted (mil. a.)	80.2	74.4	64.5
Harvested (mil. a.)	70.8	66.6	58.0
Yield (bu./a.)	30.3	30.4	31.0
Supply		----million bushels----	
Bgn. stocks	664	1,111	1,100
Production	2,147	2,027	1,798
Imports	3	2	2
Total Supply	2,814	3,140	2,900
Disappearance			
Food	553	560	565
Seed	88	80	85
Feed	112	220	200
Total domestic	753	860	850
Exports	950	1,150	1,050
Total Use	1,703	2,010	1,900
End Stocks	1,111	1,130	1,000*

* Assumed.

Corn

Carryover supplies of corn on October 1, 1978 are projected at 1.1 billion bushels. This assumes a 350-million bushel increase in feed usage (+10%) over 1976-77 levels. Exports are projected to decline 7.5 percent from 1976-77 levels.

In looking to the 1978 crop year, I reduced harvested acreage 4 percent and increased yields about 1.5 bushels per acre. With these assumptions, production would be down 2.5 percent from 1977 crop (November 1 estimate). Feed usage in 1978 is projected to increase 4 percent or 150 million bushels. The 4,050 million bushel feed usage is 260 million under that used in 1972-73 when beef production was 16 percent lower and pork production was 5.5 percent lower than what I expect for the 1978 production. Exports were projected at 1.65 billion bushels. Under these assumptions, carryover supplies on October 1, 1979 would be 1,025 million bushels, down only 3.3 percent from the October 1, 1978 levels.

Prices are forecast to be $1.60 low to $2.15 high, with $1.80-$1.90 average. If a drouth developed in the U.S. in 1978, or a sudden large increase in export demand occurred, prices would rebound upward. The high would likely be between $2.50 and $2.80 per bushel, the price at which corn could be redeemed from the world food reserve and at which all loans must be called by the ASCS.

Corn Balance Sheet

	1976-77	1977-78	1978-79
Planted (mil. a.)	84.1	82.4	77.7
Harvested (mil. a.)	71.1	69.6	66.8
Yield (bu./a.)	87.4	91.5	93.0
		----million bushels----	
Supply			
Bgn. stocks	398	879	1,062
Production	6,216	6,367	6,212
Imports	2	1	1
Total Supply	6,616	7,247	7,275
Disappearance			
Feed	3,538	3,900	4,050
Food/Ind/Seed	515	535	550
Total Domestic	4,053	4,435	4,600
Exports	1,684	1,750	1,650
Total Use	5,737	6,185	6,250
End Stocks	879	1,062	1,025

Soybeans

With the record supply of soybeans, and strong demand for protein around the world, soybean usage is expected to increase about 160 million bushels in 1977-78 over year-earlier levels. With the relatively favorable outlook for soybeans compared to other crops, reduced cash flow and storage needs for soybeans, acreage is expected to increase by about 2 million acres in 1978. The average yield will likely be somewhat lower because of some poorer quality land being planted to soybeans, and perhaps some loss in timeliness, and less favorable weather.

Total supplies are expected to increase by about 85 million bushels for the 1978 crop year, while utilization will increase only about 55 million. Thus, carryover supplies on September 1, 1979 are likely to be more than 250 million bushels.

I'm assuming the loan of $4.50 per bushel will be a major factor in soybean prices in 1978-79. However, unlike corn and wheat, prices are likely to stay above the loan rate.

Soybean Balance Sheet

	1976-77	1977-78	1978-79
Planted (mil. a.)	50.3	59.3	62.3
Harvested (mil. a.)	49.4	58.1	60.0
Yield (bu./a.)	25.6	28.9	27.5
Supply		----million bushels----	
Bgn.	245	103	221
Production	1,265	1,683	1,650
Total Supply	1,510	1,786	1,871
Disappearance			
Crush	790	860	880
Exports	564	625	650
Seed/Feed/Resid.	53	80	90
Total Use	1,407	1,565	1,620
End Stocks	103	221	251

Summary of 1978 Price Prospects--Indiana Cash Prices

	High	Low	Average
Corn	$2.15	$1.60	$1.90
Soybeans	5.00	4.50	4.75
Wheat	2.25	1.80	2.10

1978 Average Cash Prices
With Various Size Crops

If 1978 crop production turns out to be larger, or smaller, than those used in the balance sheets, the prices will be lower, or higher than those projected. The following table is an estimate of the most likely changes in price with various size crops.

Corn		Soybeans		Wheat	
Bil. Bu.	Price	Bil. Bu.	Price	Bil. Bu.	Price
6.4	$1.75	1.7	$4.50	2.0	$1.90
6.2	1.85	1.6	4.75	1.9	1.90
6.0	1.90	1.5	5.00	1.8	2.10
5.8	2.00	1.4	5.50	1.7	2.10
5.6	2.20	1.3	5.75	1.6	2.15
		1.2	6.50		

Summary

The loan price will be a major factor in determining the level of grain prices during the next couple years (or more). If the production and consumption estimates in this publication are somewhat near the actual, we could stabilize the accumulation of surplus grain by the fall of 1979. Feeding ratios are expected to be good enough to provide an opportunity to expand livestock production.

It's possible to forward price the 1978 crop by hedging into the harvest month and rolling the hedge forward at a later date. At mid December, this would result in prices higher than the average expected. Storage is necessary to avoid depressed prices at harvest.

Note: See the "Update" starting on page 27 for the changes in farm programs which were announced from the White House March 29, 1978.

PARTICIPATION VS. NONPARTICIPATION IN SET-ASIDE PROGRAM

By Paul R. Robbins

In making the decision regarding participation in the farm program for 1978, carefully consider the following factors in appraising the profitability of the program for your farm.

- Percentage set aside required to be eligible for program benefits.
- The impact of cross-compliance requirements on your operation.
- Expected prices for various grains from 1978 crop.
- Expected yield levels and yield relationship of various grain crops for your farm.
- Established ASCS yield for wheat, corn and other feed grains for your farm.
- Estimated 1978 variable production costs for various crops and costs that could be reduced through participation.
- Estimated costs that you would incur on set-aside acres.
- Possible benefits you might receive from disaster payments.
- The amount of corn storage available for your 1978 crop--without corn storage the program would be of little benefit unless you expect U.S. corn price to average $1.70 or less.

The following Tables 1, 2, 3, and 4 may serve as a model in helping appraise the profitability of participation on your farm.

Estimating Government Deficiency Payments

To analyze whether participation or nonparticipation will lead to highest crop income, first you need to determine the amount of government deficiency payments for the crops you grow. Table 1 illustrates how payments may be computed. Contact your County ASCS office for your established yields (line 1).

Soybeans have no deficiency payments or set-aside requirements, but would be eligible for loan if the farmer chooses to participate in the government program with his wheat and feed grains.

Table 1. Estimating Government deficiency payments (example)

		Crops		
		Corn	Wheat	Soybeans
1.	Established ASCS yield/acre [1/]	110	50	No
2.	Payment rate per bushel [2/]	$ .10	$ .75	Deficiency
3.	Subtotal (line 1 x line 2)	$11.00	$37.50	
4.	Program allocation factor (%) [3/]	91	80	Payment
5.	Deficiency payment/acre	$10.00	$30.00	On
6.	Payment on 600 crop acres: (transfer to line 6, Table 3)			
	a) 10% corn set aside	$5450.00	--	Soybeans
	b) 0% corn set aside	$6000.00		
	c) 20% wheat set aside		$15000.00	

1/ ASCS established yields should be near realistic estimated yields. For example, ASCS established Indiana corn yield for 1977 was 105.5 bu. compared to the actual Indiana average yield of 103.3 bushels for 1975-77. Established Indiana wheat yield for 1977 was 42.6 compared to actual 1975-77 Indiana average yield of 40.3 bushels.

2/ Payment rate per bushel is computed here as difference between target price and loan rate. For corn, ($2.10 - $2.00 = 10¢/bu.). For wheat, ($3.00 - $2.25 = 75¢/bu.). Payment rate is the smaller of: (a) target price less loan rate (b) target price less average national market price for the first 5 months of the crop marketing year. Thus the price listed here is the maximum possible per bushel payment.

3/ Program allocation factor is set by the Secretary of Agriculture after harvest and based upon size of the crop in relation to domestic and export needs and desired changes in carryover. NOTE: Minimum is 80 percent (.80) and maximum is 100 percent (1.00) This allocation factor will be applied to deficiency payments if a farmer does not voluntarily reduce acreage from the previous year by the percentage recommended by the Secretary when the national program acreage is announced.

In Table 2, we have attempted to estimate average variable costs per acre for corn, soybeans, wheat and wheat plus soybeans double crop. Yield levels are about 10 percent above state average. Double crop soybean yield is quite variable and is considerably influenced by farm location (southern vs. northern Indiana), tillage system, planting date, etc. In Table 2 we have not included indirect or fixed costs since your decision on participation

Table 2. Estimated per acre 1978 direct or Out-of-pocket costs for producing major grain crops in Indiana [1/]

	Corn	Soybeans	Wheat	Wheat and Soybeans Double Crop
1. Yield	110	35	50	50 21
Direct costs/acre				
2. Fertilizer & lime [2/]	$ 28.65	$ 10.00	$ 21.70	$ 27.50
3. Seed	11.00	7.50	8.00	20.00
4. Herbicides & insecticides	9.00	8.50	--	21.00
5. Machine operation [3/]	23.00	11.75	8.50	22.50
6. Interest on operating capital & Miscellaneous	7.00	4.50	4.50	9.00
Total [4/] [5/]	$ 78.65	$ 42.25	$ 42.70	$100.00

1/ Assumes somewhat above average management level.

2/ Assumes soils testing medium to high in phosphate and potash. Assumes application rates of N, P_2O_5 and K_2O of 135-40-60 for corn, 0-35-35 for soybeans and 60-40-20 for wheat. Fertilizer for double crop soybeans was pro-rated on a per bushel basis from the single crop soybean rate. Soybeans were given a fertility credit for nitrogen produced of 35 lbs. per acre for single crop and 20 lbs. per acre for double crop. 1978 cost estimates were 11, 18 and 8.5¢ per unit, respectively, for nitrogen, phosphate and potash except nitrogen for wheat was charged at 20¢ per unit.

3/ Includes variable cost for drying both corn and wheat.

4/ Direct costs do not include interest and taxes on stored grain. Under participation the interest would largely be covered by the loan program, assuming the grain is turned over to the Government.

5/ Fixed costs, which would change little or none in 1978 regardless of your crop selection or decision to participate or not participate in the farm program are not included.

will likely have little or no impact on these costs for 1978. Fixed costs would include a charge for land (interest on investment, taxes, etc.); for machinery (depreciation, interest on investment, insurance and shelter); for grain storage (depreciation, interest, taxes and insurance); and for labor and management. If any of these costs would be reduced or increased in 1978 by your decision to participate, then they should be taken into account in making the decision.

Table 3 builds on Tables 1 and 2 by taking a 600-acre sample farm and with slightly above state average yields and assumed prices, shows the budgeted returns for various grain crops under both participation and nonparticipation in the set-aside.

As of the release date of this publication, a 10 percent conditional set-aside had been announced for feed grains. Final decision on percentage of feed grain set-aside will not be determined until early 1978. Thus, in Table 3, both 10 percent and 0 percent set-aside are computed for corn so as to cover either option.

Prices used in Table 3 are not meant to be price forecasts, but are for example only.

Should the Secretary of Agriculture announce a zero feed grain set-aside to be eligible for deficiency payments, nonrecourse loans and disaster payments, nearly all Hoosier farmers should find participation attractive.

Farmers who have land well-adapted to wheat and are growing a sizable acreage of wheat for 1978 will also likely find participation more profitable than nonparticipation. Following the wheat with a soybean double crop, where feasible, can greatly improve profit prospects.

Based on yields, prices and costs used in Table 3, let's assume 300 acres devoted to corn, including 10 percent set-aside, 200 acres to single crop soybeans, and 100 acres to wheat plus double crop soybeans and including the 20 percent set-aside. The average return per acre could be computed as follows:

300 Acres corn @ $139/A	= $41,700	return over variable costs
200 Acres soybeans @ $124/A	= $24,800	return over variable costs
100 Acres wheat and soybeans double crop @ $121/A	= $12 100	return over variable costs
Total returns	$78,600 ÷ 600 A = $131/A	

Table 4 permits a comparison of returns from various grain crops under participation and nonparticipation at various price levels. For example, corn grown under 10 percent set-aside participation appeared to be the most profitable land use up to about $2-per bushel for corn. At $2-per bushel or higher for corn, and assuming 10 percent set aside, nonparticipation was more profitable than corn produced under participation.

Storage Considerations

Tables 3 and 4 assume stored grain prices. To be eligible for a loan on grain, the grain must be satisfactorily stored. Price protection through a Government loan on the grain

Table 3. Estimated 1978 returns to fixed costs and management on 600 crop acres for various crops when not participating and when participating in set-aside

	Nonparticipation in set-aside				Participation in set-aside			
	Corn	Soybeans	Wheat	Wheat-beans doublecrop	Corn % Set-aside 10	Corn % Set-aside 0	Wheat	Wheat-beans doublecrop
1. Harvested acres 1/	600	600	600	600	545	600	500	500-500
2. Set-aside acres 2/	---	---	---	---	55	---	100	100
3. Yield 3/	110	35	50	50-21	111	110	50	50- 22
4. Assumed price 4/	$1.90	$4.75	$2.25	$2.25-4.75	$2.00	$2.00	$2.25	$2.25-4.75
5. Gross sales	$125,400	$99,750	$67,500	$127,350	$120,990	$132,000	$56,250	$108,500
6. Est. deficiency payments	---	---	---	---	5,450	6,000	15,000	15,000
7. Gross receipts	$125,400	$99,750	$67,500	$127,350	$126,440	$138,000	$71,250	$123,500
8. Direct costs (Harvested acres) 5/	$47,190	$25,350	$25,620	$60,000	$42,864	$47,190	$21,350	$50,000
9. Direct costs (Set-aside acres) 6/	---	---	---	---	$ 412	0	$750	$750
10. Income over direct costs	$78,210	$74,400	$41,880	$67,350	$83,164	$90,810	$49,150	$72,750
11. Income over direct cost/A	$ 130	$ 124	$ 70	$ 112	$ 139	$ 151	$ 82	$ 121

1/ In most cases it is not reasonable to assume that the entire farm would be devoted to one crop. This is for illustration only, in order to indicate returns from a crop when participating in set-aside vs. nonparticipation.

2/ The set-aside requirement for wheat will be 20%. There is a conditional 10% set-aside on feed grains, but this will be re-examined in early 1978 and could be reduced to zero.

3/ It is assumed that yields might be raised slightly under participation because of more timeliness and possibly using below average productivity land for set-aside.

4/ These prices are not meant to be price forecasts. In late fall 1977, it was possible to hedge in or contract 1978 prices somewhat above those indicated here. The 1978 loan rates were used as assumed prices under participation. See Table 4 for returns under different price assumption.

5/ Indirect costs for machinery and equipment, land, labor and grain storage are not included since many of these costs would not change in 1978 regardless of land use. If some of these costs are variable costs to you, such as rented grain storage or hired part-time labor, then make an adjustment in direct costs.

6/ A direct cost of $7.50 per acre was charged against the set-aside acres. For some farmers the fertility value and/or pasture during the "off-season" could equal or exceed the variable costs on the set-aside acres. Grazing will be permitted on set-aside acres 6-months of the year. However, there will also be established a continuous 6-month nongrazing period between February 28 and November 1.

Table 4. Estimated 1978 returns to fixed costs and management per acre under various price levels when participating and not participating in set-aside (Assumes yields and costs shown in Table 3)

If prices are:			Return per acre to fixed costs and management 1/					
			Soybeans	Corn			Wheat-beans double crop	
				Non participation	Participation set-aside 2/		Non participation	participation 2/
Corn	Soybeans	Wheat			10%	0%		
1.70	4.25	1.90	107	108	139	151	84	112
1.80	4.50	2.10	115	119	139	151	100	116
1.90	4.75	2.30	124	130	139	151	115	122
2.00	5.00	2.50	133	141	139	151	130	128
2.10	5.25	2.70	142	152	140	152	145	134
2.20	5.50	2.90	150	163	150	163	160	140
2.30	5.75	3.10	159	174	160	174	176	150
2.40	6.00	3.30	168	185	170	185	191	163

1/ Fixed or indirect costs would be higher for corn and for wheat-soybeans double crop than for single crop soybeans. Only variable costs are considered in arriving at returns in this table. Take into account any of your fixed costs that may need to be adjusted in 1978 as a result of crop mix that you choose.

2/ Loan rate was used as price of corn and wheat when assumed price was below the loan rate. Thus, these returns assume that you have storage available and can take advantage of the nonrecourse loan.

with low rate of interest (6%) or zero interest if grain is turned over to the Government is the major incentive for participation by corn farmers for 1977 and 1978 corn crops. But, without storage to take advantage of the loan feature, participation at 10 percent set-aside would not likely be profitable in 1978 for corn farmers unless corn prices are expected to be $1.70 or less. Also, farmers who feed a large portion of their grain to livestock would not likely find program participation profitable. However, another possible benefit of the program, although difficult to appraise, is that of disaster payments which do reduce risks somewhat.

Farmers should not overlook the opportunity to borrow funds from ASCS for building grain storage. A farmer may borrow up to 85 percent of the cost for construction of grain storage at an interest rate of 7 percent, repaid over 8 years. Maximum loan limit is $50,000.

Also, if grain storage is limited, serious consideration should be given to shifting to more soybeans and less corn. About 3 acres of beans can be stored in the space required for one acre of corn. Stored beans often give a higher return than corn that must be sold at harvest.

Marketing Conditions

Grain marketing has been an extremely important function during the past several years. The same is likely to be true for the 1978 crop. It may be important to price a part of the 1978 corn and soybean crop early through hedging or contracting. This may be of even greater importance to those farmers who have no storage or only limited storage and hence can't take advantage of the loan program and must deliver grain during the harvest glut when the basis is wide.

THE NEW FEED GRAIN PROGRAM
IMPLICATIONS FOR LANDLORDS AND TENANTS

By D. H. Doster

The new program appears to show very little bias towards landlords or tenants. Both parties should check with local ASC offices to be sure each meets cross-compliance requirements when more than one farm is rented. Leasing arrangements may be adjusted to account for sharing of costs and returns of any proposed new drying and storage facilities.

Landlord/Tenant Cost Sharing

In typical crop-share leasing arrangements, tenants provide the labor and machinery and pay all of the machinery, fuel and repairs as well as share the cost of fertilizer, seed, and pesticides. Because they pay all the machinery, fuel and repairs, tenants spend more on direct costs than do landlords in the production of crops. For example, in Table 2 of the Participation Versus Nonparticipation section of this publication, the per acre direct costs are shown to be $78.65 for corn, $42.25 for soybeans, $42.70 for wheat, and $100 for wheat-double crop beans. Of these costs the typical tenant would pay $47 for corn, $27.25 for soybeans, $25.50 for wheat, and $61.25 for wheat-double crop soybeans. Another direct cost difference occurs on set-aside acres; the tenant provides the fuel for any required seeding, mowing, etc.

Analysis of the tenant's and the landlord's share of the costs and returns, based on the information in Tables 3 and 4 in the previous section, indicates that the same criteria suggested for deciding whether to participate in the program for an owner-operator is also valid for landlords and tenants. Except for possible problems of cross-compliance between farms, tenants are likely to want to participate under the same set of circumstances as are owner-operators.

Possible Tenant Benefits

Assuming a set-aside for corn, a tenant will save 6 to 10 dollars per acre in fuel and repair costs. Of course, this will be partly offset by the tenant having to perform the required field operations to maintain the set-aside acres.

Again, assuming a set-aside for corn, tenants might conclude:

(a) They can rent that much more acreage without changing machinery.

(b) They can delay replacing present machinery since they now have some unused capacity and can thus afford some additional down time.

(c) They can get by with less hired labor since less work is being done.

Special Storage Considerations

Grain must be stored to be eligible for the government loan. In addition, farmers may supply the storage themselves for more than one year's crop. Ownership and/or control of storage facilities thus become quite important, assuming there is a shortage of storage capacity and relatively depressed prices at harvest.

Landlords may be hesitant to construct storage, particularly on smaller farms. Tenants who operate several farms may benefit from having drying and storage facilities concentrated at one location. Potentially profitable opportunities for both tenants and landlords exist if the parties can agree on constructing facilities and sharing the costs and returns. Aggressive tenants may even choose to build "excess" storage on a "home base" farm. These people might then offer storage to prospective landlords at favorable rates if they get to rent the landlord's farms.

UPDATE FOLLOWING MARCH 29, 1978 ANNOUNCEMENTS

By Bob F. Jones

This update incorporates the principal changes in the wheat, feed grain, and grain reserve programs as announced by the White House on March 29, 1978. These changes were designed to encourage greater participation in the set-aside programs and in the farmer-held grain reserve. Farmers will need to incorporate these changes in their analyses of whether or not they should participate in these programs in 1978.

The Principal Changes

1. Feed grain set aside. The original requirement of set aside acreage equal to 10 percent of acres planted is continued. No provision for payment on these acres is made except that a participant is eligible for deficiency payments and all previously announced program benefits. Under both the previous and March 29 announcements, a deficiency payment will be made if corn prices for the first five months of the marketing year are below $2.10 per bushel. The maximum per bushel deficiency payment would be $.10, i.e., the target price minus the loan rate.

The new provision is that a farmer may set aside an additional 10 percent of his acreage for which payment will be made. The payment for these acres is $.20 per bushel on the established production; i.e.:

Acreage Planted x Established Yield x $.20 = Set Aside Payment.

This payment is assured regardless of the price of corn in the fall of 1978. Payment rates for sorghum and barley are $.12 per bushel.

In order to qualify for the full payment for optional set aside the acreage planted to corn must be no more than the acreage planted in 1977. The original provision that corn acreage in 1978 must be at least 5 percent below 1977 acreage in order to qualify for the maximum deficiency payment still stands.

2. Farmer-held grain reserve. Interest will be charged at 6 percent per year for the first year of the 3-year contracts. Interest charges for the second and third years will be waived.

The national ceiling on the amount of grain in the reserve was removed. Previous

announcements raised the annual storage payment from $.20 per bushel to $.25 for wheat and corn.

3. International emergency wheat reserve. The government plans to buy 220 million bushels of wheat for an emergency grain reserve to be used to meet international food commitments.

4. Wheat grazing. Wheat producers will be offered payments for grazing wheat already planted. The payments will be $.50 per bushel or the deficiency payment, whichever is larger on normal production. Producers may receive these payments on up to 40 percent of planted acreage or 50 acres, whichever is larger.

5. Soybean loan rate. The loan rate on 1978 crop soybeans was raised from $3.50 per bushel to $4.50.

Illustration of the New Set Aside Program

The following example illustrates how payments are calculated under the new provisions. Assume:

100 bushel per acre established yield
100 acres corn to be planted in 1978
10 acres set aside required
10 acres additional set aside for guaranteed payment

Payment for the additional set aside acreage:

100 acres x 100 bushels x $.20 = $2,000 payment

If corn prices average $2.10 or more for October 1978-February 1979 this would be the total payment. For this calculation, corn prices are average prices received by farmers as reported by the Crop Reporting Service. The participant may request advance payment of one-half the $2,000 payment at the time of sign-up.

The payment for the additional set aside could be interpreted as $200 per acre for the additional acres or $100 per acre for the total 20 acres set aside.

If corn prices average below $2.10 deficiency payments will be made in addition to the above. The maximum deficiency payment would be:

100 acres x 100 bushels x $.10 = $1,000

(No allocation factor was applied here under the assumption that corn acreage is 95 percent or less of 1977 acreage.)

Thus, if corn prices average below $2.00 the maximum payment would be $3,000 or $150 per acre for all acres set aside. If price is over $2.10 the payment would be $2,000 or $100 per acre set aside.

These changes in the program make the program more attractive to farmers than the program with previous provisions. If a farmer were on the margin favoring participation before this change, these inducements will likely encourage him to participate.

Table 3, page 23 and Table 4, page 24 of EC-469 have been revised and included in this update to incorporate the March 29 changes.

The analysis in this update was prepared immediately following the March 29, 1978 announcement. Given the legislation under consideration in early April, additional program announcements may be made by the USDA and/or modification may be made in the Food and Agriculture Act of 1977.

REVISED

Table 3. Estimated 1978 returns to fixed costs and management on 600 crop acres for various crops when not participating and when participating in set-aside

	Nonparticipation in set-aside				Participation in set-aside			
	Corn	Soybeans	Wheat	Wheat-beans doublecrop	Corn % Set-aside 10	Corn % Set-aside 20	Wheat	Wheat-beans doublecrop
1. Harvested acres 1/	600	600	600	600	545	500	500	500-500
2. Set-aside acres 2/	---	---	---	---	55	100	100	100
3. Yield 3/	110	35	50	50-21	111	111	50	50- 22
4. Assumed price 4/	$1.90	$4.75	$2.25	$2.25-4.75	$2.00	$2.00	$2.25	$2.25-4.75
5. Gross sales	$125,400	$99,750	$67,500	$127,350	$120,990	$111,000	$56,250	$108,500
6. Est. deficiency payments	---	---	---	---	5,450	16,000	15,000	15,000
7. Gross receipts	$125,400	$99,750	$67,500	$127,350	$126,440	$127,000	$71,250	$123,500
8. Direct costs (Harvested acres) 5/	$47,190	$25,350	$25,620	$60,000	$42,864	$39,325	$21,350	$50,000
9. Direct costs (Set-aside acres) 6/	---	---	---	---	$ 412	$750	$750	$750
10. Income over direct costs	$78,210	$74,400	$41,880	$67,350	$83,164	$86,925	$49,150	$72,750
11. Income over direct cost/A	$ 130	$ 124	$ 70	$ 112	$ 139	$144.87	$ 82	$ 121

1/, 3/, 5/, 6/ See the original version of Table 3 page 23 for these footnotes.

2/ The set-aside requirement for wheat is 20%. The required set-aside on feed grains is 10%. Additional set-aside of 10% is optional. Payment for the second 10% is assured regardless of corn prices.

4/ These prices are not meant to be price forecasts. In early 1978 it was possible to hedge in or contract 1978 prices somewhat above those indicated here. The 1978 loan rates were used as assumed prices under participation. See Table 4 for returns under different price assumption.

* Note: The set-aside payment for corn at the 20 percent rate assumes $.20 per bushel will be paid for additional set-aside regardless of corn prices. In this example the deficiency payment which depends on corn prices next fall is reduced by an assumed allocation factor of .91. It can vary between .80 and 1.00. Established yield is assumed to be 110 bushel in this example.

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Table 4. Estimated 1978 returns to fixed costs and management per acre under various price levels when participating and not participating in set-aside (Assumes yields and costs shown in Table 3)

If prices are:			Return per acre to fixed costs and management 1/					
			Soybeans	Corn			Wheat-beans double crop	
				Non participation	Participation set-aside 2/		Non participation	participation 2/
Corn	Soybeans	Wheat			10%	20%		
1.70	4.25	1.90	107	108	139	145	84	112
1.80	4.50	2.10	115	119	139	145	100	116
1.90	4.75	2.30	124	130	139	145	115	122
2.00	5.00	2.50	133	141	139	145	130	128
2.10	5.25	2.70	142	152	140	146	145	134
2.20	5.50	2.90	150	163	150	155	160	140
2.30	5.75	3.10	159	174	160	164	176	150
2.40	6.00	3.30	168	185	170	174	191	163

1/ Fixed or indirect costs would be higher for corn and for wheat-soybeans double crop than for single crop soybeans. Only variable costs are considered in arriving at returns in this table. Take into account any of your fixed costs that may need to be adjusted in 1978 as a result of crop mix that you choose.

2/ Loan rate was used as price of corn and wheat when assumed price was below the loan rate. Thus, these returns assume that you have storage available and can take advantage of the nonrecourse loan.